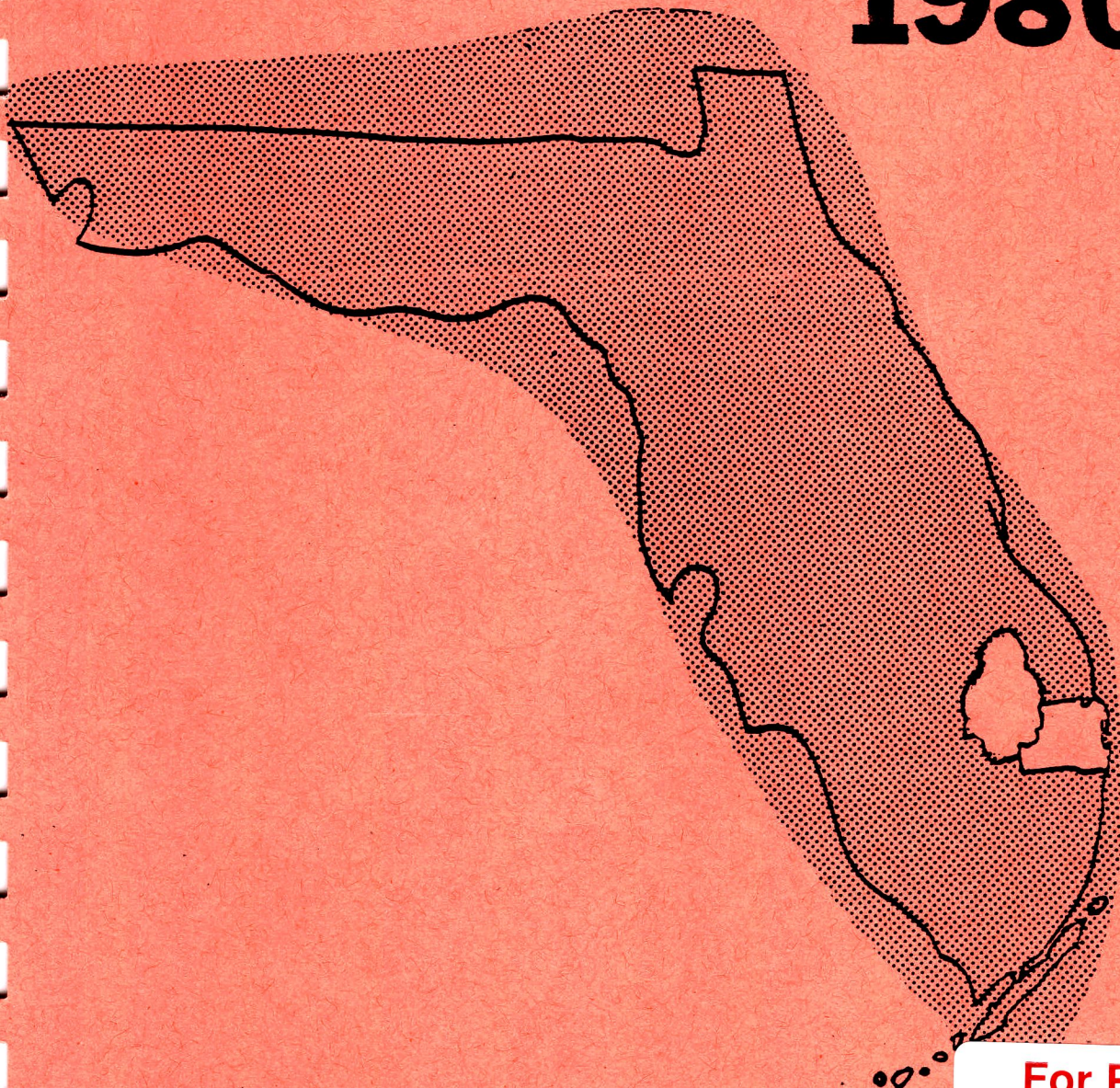


**PALM BEACH COUNTY, FLORIDA
DIVISION OF ENVIRONMENTAL
SCIENCE AND ENGINEERING
AIR POLLUTION CONTROL**

ANNUAL REPORT 1980



For Reference

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PALM BEACH COUNTY HEALTH DEPARTMENT

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I

INTRODUCTION

Palm Beach County is located along the southeast coast of Florida, and is part of what is generally called the "Florida Gold Coast". The "Gold Coast" consists of four counties: Palm Beach, Broward, Dade and Monroe. Palm Beach County is geographically separated into two regions: one region is a highly urbanized coastal strip, stretching approximately forty-five (45) miles from Tequesta on the north, to Boca Raton on the south: and the other is agricultural, located in the western portion of Palm Beach County (The Glades Area).

The population distribution within the County depicts this same unusual pattern. Virtually all of the population is located in two relatively small areas: the coastal strip adjacent to the Atlantic Ocean and along a narrow band adjacent to Lake Okeechobee. A population table is included in this section.

The majority of the population, approximately 90%, is located on the coast for a distance of approximately ten miles inland from the Atlantic Ocean. Developments through the years have resulted in several municipalities along the coastal strip.

The band adjacent to Lake Okeechobee contains virtually all of the remaining 10% of the County's population. Municipalities which are included in the Glades area are: Belle Glade, Pahokee and South Bay. The economy of this area is an agricultural one, based principally on sugar cane and winter vegetables.

Tourism and related fields continue to be the major economic factors of this area. Tourism has increased along with increased population. Other major industries in the area include building construction and related fields, agriculture, aircraft testing facility, electronics, cement and

concrete, asphaltic concrete and the service industries.

The complexity of the problems of Air Pollution Control are related to the widespread growth of Palm Beach County. Advances in environmental protection activities, which are being carried out by this program, have been utilized in order to keep abreast of air pollution problems. These activities are characteristic of urban areas across the nation.

The administration of the state air permit system is one of the many activities handled by the Air Pollution Section of the Palm Beach County Health Department. The Department of Environmental Regulation requires both a permit to construct and a permit to operate any air pollution source. As administrator of the permit system, our local program is in the position to prevent the improper construction of a pollution source and to assure that adequate pollution control equipment is utilized and maintained.

Other activities include: consultations with industries and engineers on impending permit action; enforcement action; complex source requirements; and required compliance schedule and increments of progress surveillance. Also, our local program investigates and initiates the necessary follow-up action regarding all citizen complaints. As part of the State Air Implementation Plan, this agency is required to conduct source inspection of existing and new sources in Palm Beach County, in order to assure that all sources are in compliance with State air pollution regulations.

The air monitoring capabilities of our program continues to be the ultimate means of maintaining air quality standards in Palm Beach County. The Environmental Control Air Monitoring Laboratory located in West Palm Beach is capable of continuously measuring: Total Hydrocarbons (THC), Carbon Monoxide (CO), Nitrogen Dioxide (NO₂), and four meteorological parameters (wind speed, wind direction, temperature, and relative humidity). The data is collected through the use of recorders plus a centrally controlled

data acquisition system. Our ozone monitor was removed from the air monitoring laboratory in 1979 and relocated in the Town of Royal Palm Beach in order to comply with the E.P.A. siting criteria. The ozone site is a National Air Monitoring Site (NAMS) and became operational on March 1, 1979. A second ozone NAMS was located at our 20-mile bend site and our sulfur dioxide (SO₂) site was moved to Riviera Beach to comply with the E.P.A. siting criteria. Each of the ozone sites are equipped with continuous meteorological sensing equipment.

All data from the aforementioned systems is transcribed on SAROAD (Storage and Retrieval of Aerometric Data) forms for input into the National Aerometric Data Bank. Furthermore, the air pollution control program has continued to monitor for the frequency and intensity of temperature inversions at the Division of Forestry's observation tower located in Loxahatchee, Florida.

In addition to the above, our air quality monitoring network includes ten (10) high volume particulate sites. All analysis pertaining to air pollution is performed by our chemistry laboratory located in Delray Beach.

Public relation activities during the past year by the Air Pollution section of the Palm Beach County Health Department have consisted of continued steps to inform the general public of the programs and procedures established to maintain our good air quality. These activities include wide distribution of our Annual Report, extending invitations to groups of school children and environmental clubs to visit our facilities, and presentations to school and civic groups throughout the County on the topic of "Air Pollution Control in Palm Beach County". In addition, a major aspect of our program's public relations activities is the dissemination, twice daily, of an "Air Quality Index" to the local news media.

The index utilizes the daily results of all measured pollutants.

TABLE I
POPULATION ESTIMATES BY MUNICIPALITIES
PALM BEACH COUNTY, FLORIDA

<u>MUNICIPALITY</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
Atlantis	1,240	1,305	1,359
Belle Glade	17,380	17,360	14,480
Boca Raton	47,340	50,780	49,122
Boynton Beach	32,815	34,055	34,341
Briny Breezes	480	480	377
Cloud Lake	155	155	155
Delray Beach	34,075	37,465	33,998
Glen Ridge	210	215	227
Golf (Village)	140	155	108
Golfview	210	210	206
Greenacres City	5,555	5,945	8,749
Gulfstream	620	620	473
Haverhill	1,140	1,150	1,227
Highland Beach	2,650	2,650	2,009
Hypoluxo	415	415	556
Juno Beach	1,150	1,160	1,089
Jupiter	8,225	8,890	9,360
Jupiter Inlet Colony	455	465	380
Lake Clarke Shores	3,140	3,145	3,147
Lake Park	8,385	8,610	6,374
Lake Worth	28,690	29,250	26,107
Lantana	8,470	8,525	7,959
Manalapan	310	310	307
Mangonia Park	1,695	1,710	1,137
North Palm Beach	12,625	12,740	11,149
Ocean Ridge	1,300	1,375	1,338
Pahokee	5,415	5,340	4,771
Palm Beach	10,215	10,415	9,588
Palm Beach Gardens	11,903	14,225	13,807
Palm Beach Shores	1,310	1,330	1,151
Palm Springs	9,600	10,405	7,924
Riviera Beach	28,564	28,745	25,572
Royal Palm Beach	4,279	4,555	3,350
South Bay	3,180	3,210	3,595
South Palm Beach	1,695	1,715	1,354
Tequesta	3,980	4,035	3,589
West Palm Beach	65,220	66,170	58,424
 TOTAL INCORPORATED	 364,240	 379,285	 348,859
 UNINCORPORATED	 166,625	 185,665	 204,447
 TOTAL COUNTY	 530,865	 564,950	 553,306

NOTE: 1978 & 1979 figures taken from Palm Beach County Area Planning Board
1980 figures taken from U.S. Census Bureau (Preliminary)
1980 figures are subject to change due to local request for review.

II

METEOROLOGY

Topography is of primary importance whenever the meteorological aspects of a given region are to be evaluated. Palm Beach County is a fairly level region. For the most part, Palm Beach County is between 10 and 20 feet above sea level. All urban development is located along the eastern 15 miles of the coastal strip. Most of the western portions of the County are covered by agricultural lands or everglades. The agricultural lands are endowed with a rich peatlike "muck" soil. The Atlantic Ocean borders the eastern edge of the County and the Gulf Stream flows northward approximately 3 miles off-shore. Seldom does a cold air mass reach this region without being modified due to marine influences and our southern location. Light freezes occur infrequently along the coastal areas of the County and more frequently in the everglades and agricultural areas. The most eastern parts of the County come under the influence of the sea breeze during the day and land breeze during the night. Based on weather data accumulated at Palm Beach International Airport (Table 2), August is the warmest month with a mean of 82.3°F, a maximum mean of 90.2°F, and minimum mean of 74.4°F. From the same data, January is the coldest month with a mean of 65.5°F, a maximum mean of 75.0°F and a minimum mean of 55.9°F. Rain showers and/or thunderstorms of short duration are frequent during the summer season. Palm Beach County receives the greatest amount of rainfall during the summer and fall. As indicated in Table 2, the County receives an average 62.06 inches of rain per year.

Palm Beach County can be classified as a semitropical region. The Quasi-permanent location of the "Bermuda" high pressure area governs our weather. It causes our prevailing easterly surface winds in addition to

supplying the warm moist air necessary to produce the frequent air mass, frontal or nocturnal rain-showers and/or thunderstorms that occur in the County.

The position of the "Bermuda" high pressure area is also conducive to the formation of an atmosphere capable of causing high pollution days. This atmosphere can easily occur if cold air from the north moves underneath the warm moist air brought into the County by the "Bermuda" high. The result is a temperature inversion or increase of temperature with height which traps the pollutants in the lower levels.

Meteorological parameters play a significant role in understanding the over-all air pollution cycle. The motions of the atmosphere are extremely variable and must be thoroughly examined in order to determine the movement and dispersment of pollutants. Both wind direction and wind speed are of primary importance. The surface wind and the wind found in the first few hundred feet of our atmosphere must be studied to determine diffusion and movement of the pollutants. The wind direction is indicative of the direction of travel of the pollutants. The wind speed determines the time it takes the pollutants to travel to a receptor and is a function of the amount of dilution of the pollutant. Light winds, coupled with other factors, contribute to poor air quality episodes. U.S. Weather Service records for Palm Beach International Airport show the prevailing wind directions for the months of February through November are from one of the easterly headings. Mean monthly speeds vary between 7.6 mi/hr in August and 11.0 mi/hr in April (Table 2). The wind direction and speed for 1980 (Table 3) taken at our continuous monitoring site in West Palm Beach shows that a higher percentage of winds were from the east-northeast, east, or east-southeast directions and the majority of the wind speeds were in the 4-10 mi/hr category. Table 4 & Table 5 wind direction and speed, for our

Royal Palm Beach & 20 mile Bend ozone sites (NAMS) are included in this section for information purposes.

TABLE 2
PALM BEACH INTERNATIONAL AIRPORT
METEOROLOGICAL MEANS

MONTH	MEAN MAXIMUM TEMPERATURE	MEAN MINIMUM TEMPERATURE	MEAN MONTHLY TEMPERATURE	MEAN MONTHLY PRECIP. (IN)	PREVAILING WIND DIRECTION	MEAN WIND SPEED (mi/hr)
JANUARY	75.0	55.9	65.5	2.60	NW	9.9
FEBRUARY	76.0	56.2	66.1	2.60	SE	10.3
MARCH	79.3	60.2	69.8	3.32	SE	10.7
APRIL	82.9	64.9	73.9	3.51	E	11.0
MAY	86.1	68.9	77.5	5.17	ESE	9.7
JUNE	88.3	72.7	80.5	8.14	ESE	8.1
JULY	89.6	74.1	81.9	6.52	ESE	7.5
AUGUST	90.2	74.4	82.3	6.91	ESE	7.6
SEPTEMBER	88.3	74.7	81.5	9.85	ENE	8.6
OCTOBER	84.3	70.1	77.2	8.75	ENE	10.1
NOVEMBER	79.5	62.5	71.0	2.48	ENE	10.0
DECEMBER	76.1	57.4	66.8	2.21	NNW	9.9
YEARLY	83.0	66.0	74.5	62.06	ESE	9.5

Table 3
 Site # 1 - West Palm Beach
 Wind Direction and Speed (MI/HR) Occurrences
 1980

Direction (Degree)	1-3	4-6	7-10	11-16	17-21	22-27	Total	Percent
346-15 (N)	98	104	90	17	1	0	310	4.46
16-45 (NNE)	160	106	52	4	0	0	322	4.63
46-75 (ENE)	416	81	11	0	0	0	508	7.30
76-105 (E)	504	277	105	7	0	0	893	12.83
106-135 (ESE)	230	201	155	49	0	0	635	9.13
136-165 (SSE)	145	172	216	108	1	0	642	9.23
166-195 (S)	120	96	67	23	0	0	306	4.40
196-225 (SSW)	119	86	51	59	0	0	315	4.53
226-255 (WSW)	153	86	65	29	0	0	333	4.79
256-285 (W)	140	62	24	8	1	0	235	3.38
286-315 (WNW)	169	129	96	22	1	0	417	5.99
316-345 (NNW)	196	134	102	39	3	1	475	6.83
Calm	1565						1565	22.50
Total	4015	1534	1034	365	7	1	6956	
Percent	57.72	22.05	14.86	5.26	.10	.01		

TABLE 4
SITE #21-Royal Palm Beach
WIND DIRECTION AND SPEED (MI/HR) OCCURRENCES
1980

Direction (Degree)	1-3	4-6	7-10	11-16	17-21	22-27	Total	Percent
346-15 (N)	411	78	13	0	0	0	502	5.93
16-45 (NNE)	199	36	1	0	0	0	236	2.79
46-75 (ENE)	126	15	0	0	0	0	141	1.66
76-105 (E)	249	68	1	0	0	0	318	3.76
106-135 (ESE)	754	567	47	0	0	0	1368	16.16
136-165 (SSE)	210	152	30	0	0	0	392	4.63
166-195 (S)	285	205	124	3	0	0	617	7.29
196-225 (SSW)	257	102	52	2	0	0	413	4.88
226-255 (WSW)	197	81	35	1	0	0	314	3.71
256-285 (W)	191	85	20	1	0	0	297	3.51
286-315 (WNW)	316	165	37	9	0	0	527	6.22
316-345 (NNW)	396	160	26	0	0	0	582	6.87
Calm	2759						2759	32.59
Total	6350	1714	386	16	0	0	8466	
Percent	75.00	20.25	4.56	.19	0	0		

TABLE 5
 Site #16-20 Mile Bend
 Wind Direction and Speed (MI/Hr) Occurrences
 1980

Direction (Degree)	1-3	4-6	7-10	11-16	17-21	22-27	Total	Percent
346-15 (N)	116	41	27	5	0	0	189	3.23
16-45 (NNE)	343	115	79	7	0	0	544	9.29
46-75 (ENE)	235	123	119	13	0	0	490	8.37
76-105 (E)	219	132	125	11	0	0	487	8.32
106-135 (ESE)	269	150	89	19	0	0	527	9.00
136-165 (SSE)	224	121	91	33	0	0	469	8.01
166-195 (S)	179	77	74	18	0	0	348	5.94
196-225 (SSW)	202	92	54	18	0	0	366	6.25
226-255 (WSW)	152	96	34	13	0	0	295	5.04
256-285 (W)	79	48	24	2	2	0	155	2.65
286-315 (WNW)	211	141	80	27	6	1	466	7.96
316-345 (NNW)	374	132	72	23	0	0	601	10.26
Calm	918	0	0	0	0	0	918	15.68
Total	3521	1268	868	189	8	1	5855	
Percent	60.13	21.66	14.82	3.23	.14	.02		

III

TECHNICAL STUDIES

INTRODUCTION

The ambient air monitoring program in Palm Beach County during the year 1980 consisted of the following:

Total Suspended Particulate - 10 Sites

Total Gravimetric

Continuous Gaseous Monitoring - 4 Sites

Site 1

Nitrogen Dioxide

Carbon Monoxide

Total Hydrocarbons

Site 22

Sulfur Dioxide

Site 16 & 21

Ozone

Continuous Meteorological Monitoring - 4 Sites

Site 1

Wind Speed

Wind Direction

Temperature

Relative Humidity

Sites 16 & 21

Wind Speed

Wind Direction

Site 15

Temperature Inversion Monitoring

Microscopic Morphology

All criteria pollutant data collected is reported monthly to the Department of Environmental Regulation and to the Environmental Protection Agency for inclusion in air quality data banks (SAROAD). Gaseous pollutant levels and meteorological conditions from one site are relayed by data line to the agency's office data acquisition system. Instantaneous levels of these parameters are available at all times. One, three, eight and twenty-four averages are calculated and recorded.

Locations of the monitoring sites are shown in Figure 1. Table 6 gives site identification numbers, addresses, and parameters measured for all monitoring sites within the county. Table 7 relates measured air quality within Palm Beach County for the year 1980 to the Federal and State Ambient Air Quality Standards.

PERMANENT MONITORING NETWORK

The original monitoring network for suspended particulate sites one through eight, were established in 1969 (Site 1A excluded). The Military Trail intercept line, sites nine through twelve, was added in 1972. Six of these twelve stations have been maintained as suspended particulate monitoring sites through the report period.

Periodic automated monitoring of sulfur dioxide, nitrogen dioxide and total oxidants at sites 1 through 8 was begun in June of 1970. Carbon monoxide monitoring was added in January 1971. Total hydrocarbon monitoring was begun in May of 1972. The automated gaseous and meteorological monitoring equipment was installed in the West Palm Beach monitoring station (Site 1) in November of 1972. Original Technicon Monitoring equipment for nitrogen dioxide, sulfur dioxide and total oxidants was replaced during the third quarter of 1973. Total oxidant monitoring was replaced by ozone monitoring at this time. Site 1 was maintained as the central monitoring station for gaseous pollutants, T.S.P., and meteorologic parameters until March 1978, when the ozone monitor was relocated in Royal Palm Beach (Site 21). A second rural ozone monitor was placed on line in January 1980 at the South Florida Water

Management Pump Station (Site 16) in accord with the National Air Monitoring Stations (NAMS) network. Relocation of the SO₂ monitoring site to Riviera Beach (Site 22) in July, 1980 completed the State and Local Air Monitoring Stations (SLAMS) network. Network design is summarized in Table 8.

A special study of sulfur dioxide levels and meteorological parameters was conducted in Belle Glade (Site 8) from September of 1972 until May, 1978.

Two manual stations for the measurement of nitrogen dioxide were established in November 1963 and maintained until October of 1978 as required by the State Implementation Plan. Manual sulfur dioxide stations have been operated periodically as part of special study projects.

PARTICULATE MONITORING

Methodology: Standard High volume samplers and shelters are located at each of the ten sites. Samples are collected and handled in accordance with Referenced Method for the Determination of Suspended Particulates in the Atmosphere (High Volume Method), Federal Register, Vol. 36, No. 84 - Friday, April 30, 1971. Sampling time is twenty-four hours, running from midnight to midnight for each sampling date. The standard six day schedule as recommended by EPA is followed.

Tabulated results for suspended particulate for the year 1980 are presented in Tables 9 and 10. Figure 2 presents the range of probable logarithmic values for suspended particulate at all ten stations for the years 1979 and 1980. A historical summation for total suspended particulate measurements from 1969 to the present is presented in Table 11.

GASEOUS MONITORING

Maximum ambient air concentrations for gaseous sampling in Palm Beach County for the period 1970-1980 are presented in Table 12.

NITROGEN DIOXIDE (SLAMS)

Continuous automatic monitoring for this pollutant is carried on at Site 1. A MEC Model 1200 NO-NO_x (McMillan Electronics Corporation) chemiluminescence

analyzer was in use from November 15, 1973 until December 27, 1977. At this time it was replaced by Monitor Laboratory Model 8440. Table 13 presents monthly and annual sampling time, arithmetic means and twenty-four hour maximum concentrations. Values recorded during the periods of operation indicate levels of this pollutant well below those specified by the Ambient Air Standard. Table 14 includes quarterly and annual, one, eight and twenty-four hour concentration maximums, annual arithmetic means and the frequency distribution of ranges of pollutant levels recorded. Values recorded place the measured concentrations of this pollutant well below those of the Ambient Air Quality Standards.

CARBON MONOXIDE (SLAMS)

This pollutant is monitored continuously at Site 1. A Mine Safety Appliances, Model 200 nondispersive infrared spectrophotometric automatic analyzer, in service since January 1971, was retired and replaced by a Model 202-S on October 6, 1977. Table 15 presents a monthly record of sampling hours, one and eight hour maximums, and relates concentration maximums to the Ambient Air Quality Standard. There were no recorded values in excess of the one hour or eight hour standards during the reported period.

Table 16 presents quarterly, one and eight hour maximum values and frequency distribution of all recorded pollutant levels.

OZONE (NAMS)

This pollutant was monitored continuously at Site 1 from September 6, 1973 thru 1978. The instrumentation is a MEC Model 1100 (McMillan Electronic Corporation) Chemiluminescence analyzer. In 1978 the instrument was modified by the manufacturer to EPA designated reference method status. The monitor was relocated to Royal Palm Beach, Site 21, and placed in service there March 1, 1979.

In January, 1980 a Monitor Labs Model 8410 ozone monitor, went on line at the South Florida Water Management Pump Station (Site 16). This completed the EPA mandated NAMS ozone monitoring network for Palm Beach County.

The Dasibi Model # 1003 PC, which had the function as the calibration system since December, 1978 was reassigned to transfer calibrator status in 1980 in conjunction with a Columbia Scientific Photocal 3000 primary standard.

Table 17 and 19 present a monthly record of hours sampled and one hour maximum recorded at each site. There were no values recorded which exceed the Federal Ambient Air Quality Standard for this pollutant.

One, eight and twenty-four maximums and the frequency distribution for all pollutant levels recorded are presented on a quarterly basis in Tables 18 and 20.

The February 8, 1979 Federal Register revised the Federal primary standard for ozone. The Standard changed from an average hourly levels of 0.08 parts per million not to be exceeded more than one hour per year to a statistical determination when "the expected number of days per calendar year with maximum hourly average concentrations above 0.12 parts per million is equal to or less than one."

Table 21 and 22 gives the design value or expected maximum hourly averages for these sites based on yearly data and on last three year data Wiebull distributions. No credit is given for "seasonal free days" in these calculations.

TOTAL HYDROCARBONS (Special Purpose)

This pollutant is monitored on a continuous basis at Site 1. Instrumentation is a Mine Safety Appliances Flame Ionization Total Hydrocarbon analyzer. The study was begun May 18, 1972.

Table 23 reports hours sampled and maximum three hour values recorded, six to nine A.M., on a monthly basis. These hours are chosen as they were in the establishment of the Ambient Air Quality Standards, to reflect the influence of the morning peak traffic hours. The standard related to concentrations after subtracting methane concentrations. Because instrumentation to measure methane is not available to this agency, no such correction can be made to the values recorded and no attempt is made to relate values to Ambient Air Quality Standards.

Maximum one, eight, twenty-four hour (6-9 a.m.) concentration are reported in Table 24 on a quarterly basis. A frequency distribution for all values recorded is also presented.

SULFUR DIOXIDE (SLAMS)

Monitoring instrumentation is a Monitor Labs Model 8850 Fluorescent monitor which replaced the Beckman 906-A Sulfur Dioxide analyzer, based on coulometric titration.

Site 22, located in Riviera Beach was established in July, 1980 to monitor sulfur dioxide levels in the coastal region of the County. Table 25 reports a monthly history of hours sampled, one, three, and twenty-four hour maximums, and the number of violations for each of the related standards. Table 26 presents a quarterly and annual record of maximum values and a frequency distribution of values recorded. Calculation of an arithmetic mean for this pollutant is not feasible because ninety-seven percent of the values are below the limit of sensitivity for the instrument.

TABLE 6
MONITORING SITE LOCATIONS

SITE NO.	ADDRESS	UTM ZONE 17	MONITORING CAPABILITY
1.	West Palm Beach Water Treatment Plant First Street and Tamarind Ave. West Palm Beach, Florida	2955030N 0593232E	THC, CO, NO ₂ Meteorology
1A	Palm Beach County Health Department 901 Evernia Street West Palm Beach, Florida	2955030N 0593232E	Susp. Part.
2	Tequesta Water Department 357 Tequesta Drive Tequesta, Florida	2982018N 0589963E	Discontinued December 27, 1977
3	North Palm Beach Water Treatment Plant 603 Anchorage Drive North Palm Beach, Florida	2965817N 0592780E	Susp. Part.
4	Lake Worth Water Treatment Plant 301-303 College Street Lake Worth, Florida	2943537N 0592793E	Susp. Part.
5	Delray Beach Water Treatment Plant 202 N.W. 1st Avenue Delray Beach, Florida	2927488N 0592195E	Susp. Part.
6	Boca Raton Fire Station #1 1151 N. Federal Highway Boca Raton, Florida	2915768N 05913137E	Susp. Part.
7	Royal Palm Beach Golf Course Royal Palm Beach Boulevard Royal Palm Beach, Florida	2951437N 0578767E	Discontinued March 27, 1978
8	Belle Glade Water Treatment Plant 1016 West Canal Street Belle Glade, Florida	2953082N 0533160E	Discontinued October 29, 1978
9	Grammercy Park Water Treatment Plant Park Avenue Grammercy Park, Florida	2960537N 0587329E	Discontinued February 1, 1977

TABLE 6

MONITORING SITE LOCATIONS (CONT'D)

SITE NO.	ADDRESS	UTM ZONE 17	MONITORING CAPABILITY
10	Southwest Fire Department 1180 S. Military Trail West Palm Beach, Florida	2949018N 0588207E	Susp. Part.
11	St. Vincent DePaul Seminary S. Military Trail Boynton Beach, Florida	2932890N 0586927E	Discontinued July 17, 1976
12	College of Boca Raton S. Military Trail Boca Raton, Florida	2918354N 0587320E	Susp. Part.
13	NO _x SIP Site N8 Florida Atlantic University Boca Raton, Florida	2917000N 0589500E	Discontinued October 1, 1978
14	NO _x SIP Site N9 Palm Beach Mall Palm Beach Lakes Boulevard West Palm Beach, Florida	2956000N 0590700E	Discontinued October 1, 1978
15	Division of Forestry Lat. 26° 41'N, Long 80° 16'E Loxahatchee, Florida		Temperature Inversion
16	South Florida Water Management Pump Station Twenty Mile Bend State Road 80	2951402N 0562879E	O ₃ Susp. Part. Meteorology
17	Lake Harbor Water Treatment Plant Lake Harbor, Florida	2952230N 0518600E	Discontinued December 27, 1977
18	Pahokee Health Department 1759 E. Main Street Pahokee, Florida	2967222N 0533760E	Discontinued November 1, 1978
19	Belle Glade Fire Station 22 W. Avenue "A" Belle Glade, Florida	2951420N 0532900E	Susp. Part.
20	Pahokee Sewage Treatment Plant 1050 McClure Road Pahokee, Florida	2964200N 0532300E	Susp. Part.

TABLE 6
MONITORING SITE LOCATIONS (CONT'D)

SITE NO.	ADDRESS	UTM ZONE 17	MONITORING CAPABILITY
21	Royal Palm Beach R. V. Area 10999 Okeechobee Boulevard Royal Palm Beach, Florida	2954150N 0578100E	O ₃ , Meteorology
22	Palm Beach County Health Department Warehouse 2030 Avenue L Riviera Beach, Florida	296235N 059248E	SO ₂

TABLE 7

AMBIENT AIR QUALITY STANDARDS

POLLUTANT	FEDERAL PRIMARY	FEDERAL SECONDARY	STATE	MEASURED LEVELS PALM BEACH COUNTY PPM			
				See table #			
				Site 1	Site 16	Site 21	Site 22
Suspended particulates Annual Geo. Mean	75 ug/m ³	60 ug/m ³	60 ug/m ³				
Maximum 24 hr. Conc. (2)	260 ug/m ³	150 ug/m ³	150 ug/m ³				
Sulfur Oxides Annual Arith. Mean	80 ug/m ³ (0.03 ppm)		60 ug/m ³ (0.02 ppm)				0.004
Maximum 24 hr. Conc.	365 ug/m ³ (0.14 ppm)		260 ug/m ³ (0.1 ppm)				0.013
Maximum 3 hr. Conc. (2)		1,300 ug/m ³ (0.5 ppm)	1,300 ug/m ³ (0.5 ppm)				0.016
Carbon Monoxide Maximum 8 hr. Conc. (2)	10 mg/m ³ (9 ppm)	Same as Federal	Same as Federal	5.7			
Maximum 1 hr. Conc.	40 mg/m ³ (35 ppm)	Primary	Primary	9.8			
Ozone Daily maximum 1 hr. Conc. (1)	235 ug/m ³ (0.12 ppm)	Same as Federal Primary	160 ug/m ³ (0.08 ppm)		.098	.110	
Nitrogen Oxides Annual Arith. Mean	100 ug/m ³ (0.05 ppm)	Same as Federal Primary	Same as Federal Primary	0.013			
Hydrocarbons Max. 3 hr. Conc. (6-9 am) (2) (3) (4)	160 ug/m ³	Same as Federal Primary	Same as Federal Primary	6.6			

1. The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is equal to or less than 1.
2. Concentration limits not to be exceeded more than once per year.
3. Used as a guide in devising plans to achieve oxidant standard.
4. Palm Beach County values not methane corrected.

TABLE 8
PALM BEACH COUNTY
NETWORK DESCRIPTION
NAMS, SLAMS AND SPECIAL PURPOSE

URBAN AREA	SITE ADDRESS	NETWORK	SAROAD SITE #	SAMPLER	ANALYSIS	POLLUTANT	MON.OBJ.	SPATIAL SCALE	OPE.SCHEDULE	IMPLEM.SCHIE
Belle Glade	22 W. Ave. A	SLAMS	0240-003-G01	Hi Vol	Gravimetric	TSP	Max.Conc.	Neighborhood	6 day	Operational
Boca Raton	1151 N.Fed.Hwy.	SLAMS	0280-001-G01	Hi Vol	Gravimetric	TSP	Max.Conc.	Neighborhood	6 day	Operational
Boca Raton	S. Military Trail	SLAMS	0280-002-G01	Hi Vol	Gravimetric	TSP	Max.Conc.	Neighborhood	6 day	Operational
Delray Beach	202 NW 1st Ave.	SLAMS	1000-002-G01	Hi Vol	Gravimetric	TSP	Max.Conc.	Neighborhood	6 day	Operational
Lake Worth	301 College St.	SLAMS	2220-001-G01	Hi Vol	Gravimetric	TSP	Max.Conc.	Neighborhood	6 day	Operational
N.Palm Beach	603 Anchorage Dr.	SLAMS	3060-001-G01	Hi Vol	Gravimetric	TSP	Max.Conc.	Neighborhood	6 day	Operational
W.Palm Beach	1108 S.Military Trail	SLAMS	3420-005-G01	Hi Vol	Gravimetric	TSP	Max.Conc.	Neighborhood	6 day	Operational
Rural	20 Mile Bend Rd.	NAMS	3420-006-G03	Monitor Lab	Chemilum	O ₃	Max.Conc.	Urban	cont.	Operational
Rural	10999 Okeechobee Blvd.	NAMS	3420-007-G01	MFC 1100-1	Chemilum	O ₃	Max.Conc.	Neighborhood	cont.	Operational
Riviera Beach	2030 Ave. "L"	SLAMS	3840-003-G02	Monitor Lab 8850	Fluorescent	SO ₂	Max.Conc.	Neighborhood	cont.	Operational
W.Palm Beach	1st St. & Tamarind Ave.	SLAMS	4760-001-G01	Monitor Lab 8400	Chemilum	NO _x	Max.Conc.	Neighborhood	cont.	Operational
W.Palm Beach	901 Evernia St.	SLAMS	4760-003-G01	Hi Vol	Gravimetric	TSP	Max.Conc.	Neighborhood	6 day	Operational
W.Palm Beach	1st St. & Tamarind Ave.	SLAMS	4760-001-G01	MSA 202-S	Condipersive Infrared	CO	Max.Conc.	Neighborhood	cont.	Operational
Rural	Twenty Mile Bend	S.P.	3420-006-G01	Hi Vol	Gravimetric	TSP	Max.Conc.	Neighborhood	6 day	Operational
Pahokee	1050 McClure Rd.	S.P.	3340-001-G01	Hi Vol	Gravimetric	TSP	Max.Conc.	Neighborhood	6 day	Operational
W.Palm Beach	1st St. & Tamarind Ave.	S.P.	4760-001-G01	MSA	Flame Ionization	THC	Max.Conc.	Neighborhood	cont.	Operational

TABLE 9
SUSPENDED PARTICULATE MATTER, 1980

Site No.	Geometric Mean. $\mu\text{g}/\text{m}^3$					Geo. Std. Dev.	% Above or below Annual Standard ($60 \mu\text{g}/\text{m}^3$)	24 Hr. Max. in $\mu\text{g}/\text{m}^3$	No. of Samples Above Daily Standard ($150 \mu\text{g}/\text{m}^3$)	Total No. of Samples Collected
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Annual					
1	44.2	44.4	38.5	42.0	42.2	1.34	-29.67	78	0	59
3	44.3	44.8	33.8	35.7	39.2	1.41	-34.67	90	0	61
4	47.3	47.7	44.4	41.5	45.0	1.46	-25.0	90	0	54
5	42.6	44.7	38.4	39.4	41.1	1.33	-31.5	82	0	58
6	43.6	51.2	41.8	43.9	44.8	1.37	-25.33	94	0	56
10	53.2	48.3	45.5	48.5	48.9	1.33	-18.5	87	0	58
12	39.8	37.9	34.3	31.4	35.8	1.54	-40.33	107	0	56
16	33.9	34.6	27.1	33.7	32.1	1.44	-46.5	68	0	60
19	68.6	54.4	46.2	60.0	56.5	1.34	-5.83	110	0	61
20	63.3	46.8	43.7	41.3	47.9	1.48	-20.17	164	1	55

TABLE 10
TOTAL SUSPENDED PARTICULATES - 1980

Site No.	NUMBER OF SAMPLES													Concentration ug/m ³					S/D
	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	Max.	2nd Max.	Min.	Arith. Mean	Geom. Mean	
1	5	4	5	5	5	5	5	5	5	5	5	5	59	78	70	22	43.9	42.2	1.34
3	5	5	5	5	5	5	5	6	5	5	5	5	61	90	80	20	41.5	39.2	1.41
4	5	5	2	4	5	5	4	5	4	5	5	5	54	90	90	9	47.8	45.0	1.46
5	5	5	5	5	4	4	5	6	5	5	5	4	58	82	69	26	42.7	41.1	1.33
6	5	5	5	5	3	5	5	6	5	5	4	3	56	94	93	26	47.0	44.8	1.37
10	5	5	5	5	5	5	5	3	5	5	5	5	58	87	85	23	51.2	48.9	1.33
12	5	5	5	5	3	5	4	6	5	4	5	4	56	107	75	14	38.5	35.8	1.54
16	5	5	5	5	5	5	5	6	5	5	5	4	60	68	67	19	34.2	32.1	1.44
19	5	5	5	5	5	5	5	6	5	5	5	5	61	110	96	31	58.9	56.5	1.34
20	3	5	5	5	5	5	3	6	5	3	5	5	55	164	113	16	52.0	47.9	1.48

Figure 2
Range of Probable
Logarithmic Values
High Volume Samplers
Palm Beach County
1980

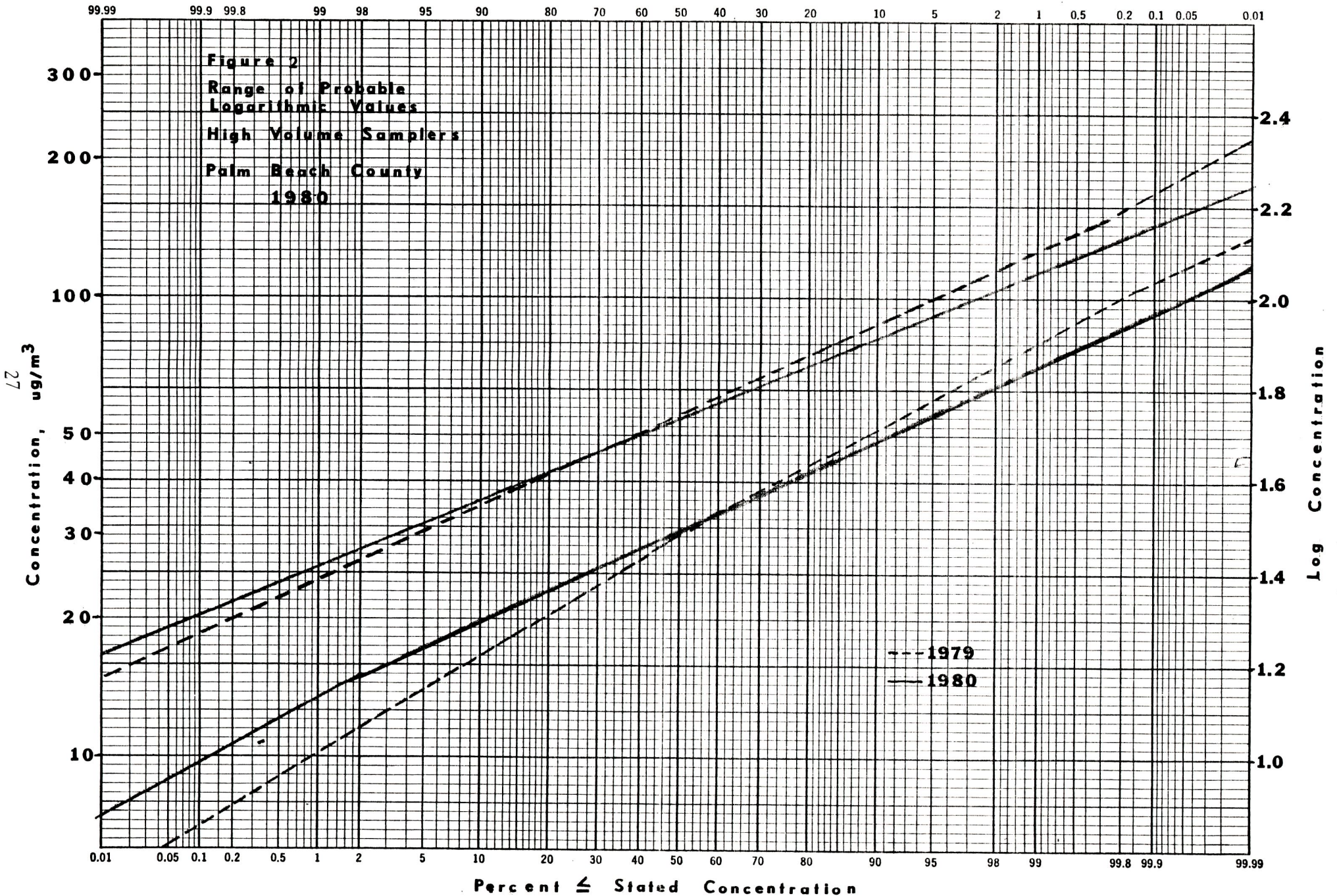


Table II
Total Suspended Particulate ug/m³
1969-1980

Site No.	Parameter	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
1	Maximum	109.3	115.7	121.1	133.6	101.9	96.4	81.5	106.2	172	92	88	78
	Minimum	9.6	13.9	15.2	15.2	10.8	19.6	20.0	15.8	17	18	18	22
	Arith. Mean	48.7	40.9	58.7	49.9	40.5	40.9	44.7	37.4	42.0	41.3	41.0	43.9
	Geo. Mean	43.9	39.5	53.4	45.9	38.0	38.8	42.4	35.3	38.3	38.2	38.5	42.2
	Geo. Std. Dev.	1.56	1.42	1.19	1.49	1.49	1.38	1.39	1.41	1.50	1.47	1.44	1.34
2	Maximum	71.2	74.3	122.3	112.3	85.4	104.0	77.7	63.1	74			
	Minimum	7.3	13.3	10.7	12.2	5.3	19.6	11.9	14.0	12			
	Arith. Mean	26.9	30.4	34.6	33.0	33.6	32.4	36.4	35.5	33.6			
	Geo. Mean	24.6	28.3	30.8	30.3	31.4	30.6	34.1	33.4	30.9			
	Geo. Std. Dev.	1.51	1.45	1.61	1.48	1.49	1.36	1.45	1.44	1.50			
3	Maximum	71.8	82.3	167.5	94.8	133.2	132.7	91.8	67.8	62	65	85	90
	Minimum	7.7	1.3	0.4	12.8	16.6	16.1	14.6	10.3	11	12	14	20
	Arith. Mean	32.2	31.7	40.6	37.0	38.2	35.8	38.3	31.4	30.4	32.1	37.8	41.5
	Geo. Mean	29.5	28.4	30.7	33.7	35.3	32.2	34.5	29.1	28.4	30.2	35.3	39.2
	Geo. Std. Dev.	1.63	1.76	2.93	1.49	1.47	1.54	1.61	1.50	1.45	1.42	1.47	1.41
4	Maximum	351.9	224.8	95.6	89.8	85.6	196.8	435.3	81.0	84	85	101	90
	Minimum	7.3	8.0	10.2	12.9	13.3	18.3	19.6	12.7	14	17	20	9
	Arith. Mean	32.9	30.9	37.2	34.8	37.7	45.2	57.1	38.2	41.0	44.6	44.7	47.8
	Geo. Mean	26.4	28.2	31.7	32.2	35.3	38.8	47.9	35.8	39.1	42.1	42.0	45.0
	Geo. Std. Dev.	1.78	1.47	1.85	1.49	1.39	1.67	1.64	1.44	1.38	1.41	1.43	1.46
5	Maximum	164.9	76.7	142.4	108.0	92.9	81.9	83.5	61.1	81	99	102	82
	Minimum	13.3	8.3	12.2	15.9	10.9	13.8	22.0	13.8	18	17	19	26
	Arith. Mean	40.1	36.2	36.4	38.5	40.0	34.8	42.0	35.8	39.1	37.6	40.4	42.7
	Geo. Mean	38.8	33.6	32.0	35.4	37.6	32.2	39.5	34.0	37.0	35.0	37.6	41.1
	Geo. Std. Dev.	1.47	1.49	1.64	1.49	1.46	1.53	1.41	1.40	1.41	1.45	1.47	1.33

Table 11 (cont.)
Total Suspended Particulate ug/m³
1969-1980

Site No.	Parameter	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
6	Maximum	83.1	80.1	237.9	275.3	106.5	92.4	114.8	62.8	79	107	124	94
	Minimum	9.5	9.6	13.3	17.0	13.6	20.9	22.4	16.4	15	18	19	26
	Arith. Mean	36.4	33.5	49.1	44.9	43.1	41.6	45.4	35.6	39.3	42.2	47.3	47.0
	Geo. Mean	32.9	31.0	41.1	39.9	40.2	38.4	42.7	33.8	37.0	39.3	43.8	44.8
	Geo. Std. Dev.	1.63	1.48	2.09	1.56	1.46	1.26	1.43	1.38	1.43	1.45	1.48	1.37
7	Maximum	52.5	71.7	131.5	102.0	65.5	98.3	70.5	55.2	64	36		
	Minimum	7.2	2.1	1.6	7.0	9.1	5.4	11.4	6.2	9	17		
	Arith. Mean	23.6	25.8	30.7	31.8	28.1	25.6	33.0	23.1	24.3			
	Geo. Mean	21.5	23.3	24.4	23.3	26.2	22.3	30.4	21.0	22.5			
	Geo. Std. Dev.	1.57	1.59	2.12	1.37	1.45	1.66	1.52	1.55	1.49			
8	Maximum	175.7	273.9	222.7	173.3	151.0	210.9	199.4	125.2	149	143		
	Minimum	12.7	14.5	12.6	19.8	20.3	22.8	10.7	12.6	17	22		
	Arith. Mean	53.8	54.6	61.4	53.6	59.8	59.8	62.4	61.6	59.0	58.8		
	Geo. Mean	46.0	47.1	53.1	52.3	54.0	54.2	56.7	56.3	54.6	53.1		
	Geo. Std. Dev.	1.75	1.70	1.64	1.60	1.61	1.57	1.56	1.56	1.49	1.57		
9	Maximum				74.50	145.3	81.2	65.3	59.1	33			
	Minimum				13.30	11.7	11.3	16.1	9.6	20			
	Arith. Mean				31.2	33.2	29.9	34.1	28.2				
	Geo. Mean				28.7	30.7	27.0	32.2	26.3				
	Geo. Std. Dev.				1.42	1.45	1.50	1.39	1.46				
10	Maximum				94.80	109.0	113.0	81.7	101.6	98	77	80	87
	Minimum				18.30	19.0	21.0	23.4	12.8	19	21	18	23
	Arith. Mean				44.4	45.3	43.0	47.2	42.8	41.4	46.0	46.2	51.2
	Geo. Mean				41.6	42.5	39.0	45.4	40.5	39.2	43.6	43.3	48.9
	Geo. Std. Dev.				1.43	1.43	1.54	1.35	1.50	1.40	1.41	1.45	1.33

Table II (cont.)
Total Suspended Particulate ug/m³
1969-1980

Site No.	Parameter	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
11	Maximum				69.9	77.8	134.3	299.9	60.8				
	Minimum				11.9	11.5	13.5	13.5	10.9				
	Arith. Mean				32.1	30.8	34.4	44.9					
	Geo. Mean				29.2	28.9	29.4	37.7					
	Geo. Std. Dev.				1.51	1.53	1.70	1.67					
12	Maximum				68.1	79.6	200.7	64.7	53.7	66	69	85	107
	Minimum				11.2	11.0	12.8	18.2	7.0	14	14	13	14
	Arith. Mean				29.6	31.7	34.9	34.2	26.9	29.8	29.0	35.0	38.5
	Geo. Mean				26.9	29.6	29.2	32.4	25.1	27.9	27.2	31.7	35.8
	Geo. Std. Dev.				1.54	1.43	1.70	1.39	1.47	1.43	1.43	1.56	1.54
16	Maximum								130.1	76	136	87	68
	Minimum								14.6	12	14	14	19
	Arith. Mean								35.0	30.9	31.5	37.3	34.2
	Geo. Mean								31.0	3812	28.7	33.8	32.1
	Geo. Std. Dev.								1.60	1.52	1.50	1.57	1.44
17	Maximum									69			
	Minimum									10			
	Arith. Mean									34.6			
	Geo. Mean									31.6			
	Geo. Std. Dev.									153			
18/20	Maximum									63	76		
	Minimum									9	16		
	Arith. Mean										30.8		
	Geo. Mean										28.8		
	Geo. Std. Dev.										1.44		

Table 11 (cont.)
Total Suspended Particulate ug/m³
1969-1980

Site No.	Parameter	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
19	Maximum										121	121	110
	minimum										20	16	31
	Arithmetic Mean										52.9	57.5	58.9
	Geometric Mean										49.6	53.9	56.5
	Geometric Std. Deviation										1.45	1.45	1.34
20	Maximum											122	164
	Minimum											21	16
	Arithmetic Mean											50.6	52.0
	Geometric Mean											46.4	47.9
	Geometric Std. Deviation											1.52	1.48

TABLE 12
GASEOUS SAMPLING
MAXIMUM AMBIENT AIR CONCENTRATIONS, PPM
1970-1980

Site No.	Sampling Dates	Sulfur Dioxide			Total Oxidants		O ₃	
		1 Hour	3 Hour	24 Hour	1 Hour	8 Hour	1 Hour	8 Hour
1	07/17-07/31/70	0.094	0.038	0.007	0.114	0.073	-	-
	04/12-04/27/71	0.044	0.028	0.006	> 0.188	> 0.130	-	-
	07/16-07/30/71	0.035	0.012	0.002	0.032	0.026	-	-
	11/14-12/31/72	0.023	0.021	0.003	> 0.187	> 0.040	-	-
	01/01-11/14/73	0.042	0.034	0.004	-	-	-	-
	11/14-12/31/73	0.015	0.008	0.001	-	-	-	-
	01/01-11/01/73				0.155	0.063		
	09/06-12/31/73						> 0.100	> 0.071
	01/01-12/31/74	0.075	0.052	0.023			0.077	0.055
	01/01-12/31/75	0.062	0.025	0.008	-	-	0.104	0.077
	01/01-12/31/76	0.055	0.034	0.021	-	-	0.148	0.122
	01/01-12/31/77	0.019	0.015	0.009	-	-	0.106	0.088
	01/01-12/31/78				-	-	0.075	0.066
	04/01-06/30/78	0.030	0.022	0.008	-	-	-	-
	01/01-10/22/79	0.024	0.017	0.016	-	-	-	-
2	06/16-07/02/70	0.035	0.026	0.010	0.104	0.093	-	-
	05/11-05/25/71	0.191	0.142	0.028	0.010	0.0004	-	-
	08/13-08/27/71	0.033	0.015	0.003	0.016	0.018	-	-
3	07/02-07/17/70	0.196	0.128	0.028	0.176	0.086	-	-
	04/27-05/11/71	> 0.500	0.324	0.060	0.111	0.055	-	-
	07/30-08/13/71	0.064	0.035	0.005	0.007	0.001	-	-
	05/18-06/30/72	0.053	0.032	0.006	0.116	0.071	-	-
	09/03-12/31/76	-	-	0.004	-	-	-	-
	01/01-12/31/77	-	-	0.004	-	-	-	-
4	07/31-08/14/70	0.031	0.024	0.010	0.129	0.089	-	-
	03/26-04/12/71	0.044	0.034	0.012	0.110	0.106	-	-
	09/23-10/04/71	0.080	0.035	0.006	0.056	0.048	-	-
	11/10-11/19/71	0.000	0.000	0.000	0.078	0.073		

TABLE 12 (cont.)
GASEOUS SAMPLING
MAXIMUM AMBIENT AIR CONCENTRATIONS, PPM
1970-1980

Site No.	Sampling Dates	Sulfur Dioxide			Total Oxidants		O ₃	
		1 Hour	3 Hour	24 Hour	1 Hour	8 Hour	1 Hour	8 Hour
5	09/04-09/18/70	0.069	0.029	0.003	0.092	0.066		
	03/12-03/26/71	0.060	0.028	0.005	0.013	0.086		
	10/19-11/01/71	0.006	0.002	0.0003	0.136	0.101		
6	08/21-09/04/70	0.076	0.048	0.013	0.048	0.037		
	01/27-02/12/71	0.132	0.098	0.017	0.110	0.095		
	12/29-01/12/72	0.068	0.034	0.006	0.000	0.000		
	07-/05-08/01/72	0.015	0.012	0.003	0.050	0.027		
7	09/28-10/12/70	0.106	0.048	0.006	0.076	0.068		
	02/26-03/12/71	0.026	0.008	> 0.003	0.110	0.093		
	11/19-12/10/71	0.015	0.006	0.001	0.038	0.016		
8	10/12-10/26/70	0.000	0.000	0.000	0.078	0.061		
	02/12-02/26/71	> 0.288	0.125	> 0.030	0.103	0.076		
	02/10-12/29/71	> 0.267	0.217	> 0.039	0.012	0.006		
	09/21/72-05/01/73	0.068	0.028	0.007				
	12/01/72-05/18/73	0.176	0.098	0.044				
	12/18-12/31/73	0.153	0.113	0.025				
	01/01-09/27/74	0.065	0.031	0.004				
	07/08-12/31/75	0.075	0.074	0.029				
	01/01-12/31/76	0.085	0.078	0.051				
	01/01-12/31/77	0.033	0.029	0.016				
	01/01-05/19/78	0.047	0.043	0.019				
16	01/03-12/31/80						.098	.081
17	09/27-12/31/76			0.003				
	01/01-12/31/77			0.003				
21	03/01-12/31/79						.079	.070
	01/01-12/31/80						.110	.080
22	07/24-12/31/80	0.016	0.014	0.013				

TABLE 12 (cont.)
MAXIMUM AMBIENT AIR CONCENTRATION, PPM.
1970-1980

Site Number	Sampling Dates	NO ₂			CO		HC	
		1 Hour	8 Hour	Ar./Mean.	1 Hour	8 Hour	1 Hour	8 Hour
1	07/17-07/31/70	0.097	0.068	0.016				
	04/12-04/27/71	0.147	0.079	0.026				
	07/16-07/30/71	0.067	0.056	0.018	3.6	3.1		
	11/14-12/31/72	0.092	0.079	0.020	7.0	3.7	6.5	3.2
	01/01-11/15/73	0.060	0.047	0.007				
	01/01-12/31/73				8.9	6.3	5.5	3.3
	01/01-12/31/74	0.080	0.052	0.015	10.5	8.8	5.8	4.4
	01/01-12/31/75	0.125	0.083	0.015	8.6	5.0	5.2	3.0
	01/01-12/31/76	0.083	0.054	0.009	10.5	5.2	5.3	3.7
	01/01-12/31/77	0.071	0.044	0.017	11.8	8.5	5.2	3.6
	01/01-12/31/78	0.089	0.070	0.012	8.6	4.5		
	10/18-12/31/78						5.8	3.2
	01/01-11/28/79	0.078	0.056	0.016				
	01/01-11/08/79				7.8	3.1		
	01/01-12/31/79						8.3	2.9
	01/01-12/31/80	0.137	0.088	0.018	9.8	5.7	9.6	6.2
2	06/16-07/02/70	0.044	0.032	0.010				
	05/11-05/25/71	0.054	0.040	0.013	2.2	0.3		
	08/12-08/27/71	0.073	0.060	0.013	0.0	0.0		
3	07/02-07/17/70	0.084	0.060	0.010				
	04/27-05/11/71	0.096	0.066	0.017				
	07/30-08/13/71	0.083	0.069	0.018	3.2	0.9		
	05/18-06/30/72	0.088	0.059	0.010	0.0	0.0	3.2	2.2
	01/01-12/31/76			0.006				
	01/01-12/31/77			0.010				
	01/01-03/31/78			0.014				
4	07/31-08/14/70	0.097	0.068	0.016				
	03/26-04/12/71	0.118	0.107	0.018	2.1	0.3		
	09/23-10/14/71	0.059	0.041	0.018	0.0	0.0		
	11/10-11/19/71	0.124	0.101	0.020	0.0	0.0		

TABLE 12 (cont.)
 MAXIMUM AMBIENT AIR CONCENTRATION, PPM.
 1970-1980

Site Number	Sampling Dates	1 Hour NO ₂	8 Hour NO ₂	Ar./Mean.	1 Hour CO	8 Hour CO	1 Hour HC	8 Hour HC
5	09/04-09/18/70 03/12-03/26/71 10/19-11/01/71	0.055 0.146 0.117	0.051 0.113 0.093	0.013 0.018 0.029	2.1 0.4	2.1 0.4		
6	08/21-09/04/70 01/27-02/12/71 12/29-01/12/71 07/05-08/01/72	0.064 >0.200 0.079 0.065	0.048 >0.187 0.069 0.055	0.015 0.047 0.022 0.011	9.6 4.2 2.6 0.8	9.6 4.2 2.6 0.8	4.2 0.4	2.6 0.1 2.2 0.0
7	09/28-10/12/71 02/26-03/12/71 11/09-12/10/71	0.031 0.106 0.074	0.018 0.081 0.055	0.007 0.016 0.019	0.8 0.1	0.8 0.1	0.1 2.0	0.0 3.0 0.0
8	10/12-10/26/70 02/12-02/26/71 12/10-12/29/71	0.118 0.152 0.076	0.067 0.091 0.048	0.017 0.022 0.024	5.2 3.0 0.0	5.2 3.0 0.0		
13	11/14-12/31/73 01/01-12/31/74 01/01-12/31/75 01/01-12/31/76 01/01-12/31/77 01/01-12/31/78			0.003 0.004 0.008 0.005 0.008 0.010				
14	11/14-12/31/73 01/01-12/31/74 01/01-12/31/75 01/01-12/31/76 01/01-12/31/77 01/01-12/31/78			0.004 0.005 0.012 0.008 0.015 0.015				

TABLE 13
NITROGEN DIOXIDE DATA
SITE NUMBER 1
1980

MONTH	HOURS	ARITH. (a) Avg., ppm	MAX. 24 HR. Avg., ppm
J	559	.018	.049
F	579	.016	.039
M	270	.009	.018
A	-0-	-0-	-0-
M	-0-	-0-	-0-
J	82	.018	.021
J	424	.008	.022
A	616	.007	.021
S	383	.016	.027
O	696	.012	.034
N	713	.011	.023
D	730	.017	.060
Annual	5052	.013	.060

(a) Standard is 0.05 ppm, annual arithmetic mean.

TABLE 14
 AMBIENT AIR-NITROGEN DIOXIDE, PPM
 SITE NUMBER 1
 1980

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual		
1 Hr. Maximum	.118	.060	.102	.137	.137		
8 Hr. Maximum	.079	.045	.048	.088	.088		
24 Hr. Maximum	.049	.021	.027	.060	.060		
Arith. Mean.	.018	.018	.016	.017	.018		
Concentration Range			Hours			%	Cum. %
< 0.010	647	34	980	1142	2803	55.48	55.48
0.010-0.019	345	16	194	511	1066	21.10	76.58
0.020-0.029	170	11	115	237	533	10.55	87.13
0.030-0.039	119	7	57	119	302	5.98	93.11
0.040-0.049	70	9	35	56	170	3.36	96.47
0.050-0.059	26	4	27	29	86	1.70	98.17
0.060-0.069	15	1	12	15	43	.85	99.02
0.070-0.079	5	-	-	13	18	.36	99.38
0.080-0.089	3	-	2	7	12	.24	99.62
0.090-0.099	4	-	-	4	8	.16	99.78
0.100-0.109	2	-	1	2	5	.10	99.88
0.110-0.119	2	-	-	3	5	.10	99.98
0.120-0.129							
0.130-0.139				1	1	.02	100.00
Total	1408	82	1423	2139	5052	57.51	.
Downtime	776	2102	785	69	3732	42.49	
Total Time	2184	2184	2208	2208	8784		

TABLE 15
CARBON MONOXIDE DATA
SITE NUMBER 1
1980

Month	Hours	Arith. Mean ppm	1 Hr. Max. ppm	No. of Times 1 Hr. Standard (35 ppm) Exceeded	8 Hr. Max. ppm	No. of Times 8 Hr. Standard (9 ppm) exceeded
J	638	.88	6.9	-0-	3.1	-0-
F	683	1.19	8.2	-0-	4.0	-0-
M	730	1.58	4.3	-0-	3.1	-0-
A	705	2.12	9.8	-0-	5.7	-0-
M	732	2.24	5.8	-0-	4.2	-0-
J	440	2.01	5.0	-0-	3.1	-0-
J	538	1.16	4.1	-0-	3.3	-0-
A	726	1.38	5.4	-0-	3.2	-0-
S	659	1.20	5.6	-0-	2.9	-0-
O	623	.78	2.8	-0-	1.6	-0-
N	713	.69	2.5	-0-	1.6	-0-
D	273	1.24	6.1	-0-	3.2	-0-
Annual	7460	1.37	9.8	-0-	5.7	-0-

Table 16
Ambient Air, Carbon Monoxide, ppm
Site Number 1
1980

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual		
1 Hr. Maximum	8.2	9.8	5.6	6.1	9.8		
8 Hr. Maximum	4.0	5.7	3.3	3.2	5.7		
24 Hr. Maximum	2.8	3.7	2.6	1.9	3.7		
Mean.	1.58	2.24	1.38	1.24	2.24		
Concentration Range			Hours			%	Cum. %
<2.0	1715	726	1685	1573	5699	76.39	76.39
2.0-2.4	187	726	106	20	1039	13.93	90.32
2.5-2.9	105	268	72	7	452	6.06	96.38
3.0-3.4	19	93	36	1	149	2.00	98.38
3.5-3.9	6	26	15	2	49	.66	99.04
4.0-4.4	4	14	6	1	25	.34	99.38
4.5-4.9	4	9		2	15	.20	99.58
5.0-5.4	4	7	2	1	14	.19	99.77
5.5-5.9	1	4	1	1	7	.09	99.86
6.0-6.4	2	1		1	4	.05	99.91
6.5-6.9	2	1			3	.04	99.95
7.0-7.4	1	1			2	.03	99.98
7.5-7.9							
8.0-8.4	1				1	.01	99.99
8.5-9		1			1	.01	100.00
Total	2051	1877	1923	1609	7460	84.93	
Downtime	133	307	285	599	1324	15.07	
Total Time at site	2184	2184	2208	2208	8784		

TABLE 17
OZONE DATA
SITE NUMBER 16
1980

Month	Hours	Arith. Mean ppm	1 Hour Maximum ppm	No. of Hours 1 Hr. Florida Std. (0.08 ppm) Exceeded	No. of Hours 1Hr. Federal Std. (0.12 ppm) Exceeded
J	244	.020	.057	0	0
F	681	.022	.083	3	0
M	494	.021	.065	0	0
A	628	.033	.085	9	0
M	730	.028	.080	1	0
J	670	.021	.074	0	0
J	652	.020	.098	1	0
A	738	.016	.082	1	0
S	452	.011	.055	0	0
O	533	.019	.078	0	0
N	656	.021	.057	0	0
D	590	.018	.053	0	0
Annual	7068	.021	.098	15	0

TABLE 18
 AMBIENT-AIR-OZONE, PPM
 SITE NUMBER 16
 1980

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual		
1 Hr. Maximum	.083	.085	.098	.078	.098		
8 Hr. Maximum	.061	.081	.069	.063	.081		
24 Hr. Maximum	.030	.058	.040	.037	.058		
Mean.	.022	.033	.020	.021	.033		
Concentration Range			Hours			%	Cum. %
<0.010	298	350	729	500	1877	26.56	26.56
0.010-0.019	397	432	467	507	1803	25.51	52.07
0.020-0.029	321	429	333	326	1409	19.94	72.01
0.030-0.039	232	287	140	306	965	13.65	85.66
0.040-0.049	137	232	116	107	592	8.38	94.04
0.050-0.059	26	167	37	22	252	3.56	97.60
0.060-0.069	5	84	16	7	112	1.58	99.18
0.070-0.079		37	2	4	43	.61	99.79
0.080-0.089	3	10	1		14	.20	99.99
0.090-0.099			1		1	.01	100.00
Total	1419	2028	1842	1779	7068	80.46	
Downtime	765	156	366	429	1716	19.54	
Total Time at site	2184	2184	2208	2208	8784		

TABLE 19
OZONE DATA
SITE NUMBER 21
1980

Month	Hours	Arith. Mean ppm	1 Hour Maximum ppm	No. of Hours 1 Hr. Florida Std. (0.08 ppm) Exceeded	No. of Hours 1 Hr Federal Std. (0.12) Exceeded
J	513	.019	.062	0	0
F	486	.024	.047	0	0
M	342	.029	.080	1	0
A	714	.036	.082	5	0
M	736	.033	.093	9	0
J	685	.026	.080	2	0
J	737	.026	.110	5	0
A	286	.019	.087	2	0
S	591	.013	.060	0	0
O	681	.022	.102	2	0
N	653	.025	.056	0	0
D	739	.021	.055	0	0
Annual	7163	.024	.110	26	0

TABLE 20
 AMBIENT-AIR-OZONE, PPM
 SITE NUMBER 21
 1980

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual		
1 Hr. Maximum	.080	.093	.110	.102	.110		
8 Hr. Maximum	.054	.080	.073	.068	.080		
24 Hr. Maximum	.041	.069	.046	.044	.069		
Mean.	.029	.036	.026	.025	.036		
Concentration Range			Hours			%	Cum. %
<0.010	257	283	508	462	1510	21.08	21.08
0.010-0.019	251	345	367	427	1390	19.40	40.48
0.020-0.029	332	389	308	422	1451	20.26	60.74
0.030-0.039	319	326	226	443	1314	18.34	79.08
0.040-0.049	141	359	111	267	878	12.26	91.34
0.050-0.059	36	254	58	34	382	5.33	96.67
0.060-0.069	3	124	26	13	166	2.32	98.99
0.070-0.079	1	39	3	3	46	.65	99.64
0.080-0.089	1	14	3	1	19	.27	99.91
0.090-0.099	0	2	3	0	5	.07	99.98
0.100-0.109	0	0	0	1	1	.01	99.99
0.110-0.119	0	0	1	0	1	.01	100.00
Total	1341	2135	1614	2073	7163	8155	
Downtime	843	49	594	135	1621	18.45	
Total Time at site	2184	2184	2208	2208	8784		

TABLE 21
OZONE DESIGN VALUES 1980
SITE NUMBER 16
WIEBULL DISTRIBUTIONS

YEAR	NUMBER OF EXCURSIONS ≥ 0.12 ppm	NUMBER OF DAYS SAMPLED	% COMPLETE	MAXIMUM 1 Hr AVERAGE ppm	2nd MAXIMUM 1 Hr AVERAGE ppm	ANNUAL DESIGN VALUE ppm	THREE YEAR DESIGN VALUE ppm
1980	0	292	79.78	.098	.083	.097	N.A.

TABLE 22
OZONE DESIGN VALUES, 1973 - 1980
SITE NUMBER 21
WIEBULL DISTRIBUTIONS

YEAR	NUMBER OF EXCURSIONS ≥ 0.12 ppm	NUMBER OF DAYS SAMPLED	% COMPLETE	MAXIMUM 1 Hr AVERAGE ppm	2nd MAXIMUM 1 Hr AVERAGE ppm	ANNUAL DESIGN VALUE ppm	THREE YEAR DESIGN VALUE ppm
1973	0	116	31.78	.111	.104	.130	
1974	0	363	99.45	.077	.074	.078	.106
1975	0	331	90.68	.104	.086	.097	.101
1976	3	270	73.97	.148	.142	.154	.123
1977	0	323	88.49	.106	.101	.106	.122
1978	0	138	37.81	.075	.069	.079	.128
1979	0	256	70.14	.082	.076	.081	.092
1980	0	299	81.69	.110	.102	.109	.101

TABLE 23
TOTAL HYDROCARBONS DATA
SITE NUMBER 1
1980

Month	Hours	3 Hr. Max. (6-9 A.M.) (a)	Arith. Mean ppm
J	731	6.6	1.88
F	576	3.3	1.83
M	635	2.8	1.71
A	704	3.5	1.82
M	735	2.4	1.76
J	-0-	-	-
J	-0-	-	-
A	-0-	-	-
S	202	3.9	2.20
O	445	4.0	2.12
N	499	2.7	1.89
D	177	2.9	2.19
Annual	4714	6.6	2.20

(a) Standard is 0.24 ppm 3 hr. Maximum concentration, 6-9 A.M. not to be exceeded more than once a year. This standard is for hydrocarbons, methane corrected, and is not applicable to the values reported above.

TABLE 24
 AMBIENT AIR-TOTAL HYDROCARBONS, PPM
 SITE NUMBER 1
 1980

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual		
1 Hr. Maximum	7.3	7.8	5.2	9.6	9.6		
8 Hr. Maximum	6.2	4.4	3.4	3.8	6.2		
24 Hr. Maximum	3.2	2.7	2.6	2.6	3.2		
3 Hr. Maximum							
6-9 AM	6.6	3.5	3.9	4.0	6.6		
Mean.	1.9	1.8	2.2	2.2	2.2		
Concentration Range			Hour			%	Cum. %
< 1.1							
1.1-1.5	115	13		79	207	4.39	4.39
1.6-2.0	1627	1295	89	666	3677	78.00	82.39
2.1-2.5	107	98	89	295	589	12.50	94.89
2.6-3.0	38	20	12	50	120	2.55	97.44
3.1-3.5	22	5	5	13	45	.96	98.40
3.6-4.0	11	3	1	13	28	.59	98.99
4.1-4.5	6	2	4	7	19	.40	99.39
4.6-5.0	6	1	1	6	14	.30	99.69
5.1-5.5	2	1	1	1	5	.11	99.80
5.6-6.0	3	-	-	-	3	.06	99.86
6.1-6.5	1	-	-	-	1	.02	99.88
6.6-7.0	1	-	-	-	1	.02	99.90
7.1-7.5	3	-	-	-	3	.06	99.96
7.6-8.0	-	1	-	-	1	.02	99.98
8.1- >	-	-	-	1	1	.02	100.00
Total	1942	1439	202	1131	4714	53.67	
Downtime	242	745	2006	1077	4070	46.33	
Total time at site	2184	2184	2208	2208	8784		

TABLE 25
SULFUR DIOXIDE DATA
SITE NUMBER #22
1980

Month	Hour	Arith. Mean. ppm	1Hr. Max. ppm	3 Hr. Max ppm	No. of Times 3 Hr. Std. Exceeded (0.500 ppm)	24 Hr. Max. ppm	No. of Times 24 Hr. Std. Exceeded (0.1 ppm)
J	-	-	-	-	-	-	-
F	-	-	-	-	-	-	-
M	-	-	-	-	-	-	-
A	-	-	-	-	-	-	-
M	-	-	-	-	-	-	-
J	-	-	-	-	-	-	-
J	174	1.75	.008	.007	-0-	.005	-0-
A	570	.40	.013	.004	-0-	.002	-0-
S	711	2.65	.012	.010	-0-	.006	-0-
O	697	1.74	.010	.008	-0-	.005	-0-
N	707	3.41	.014	.012	-0-	.008	-0-
D	552	3.67	.016	.014	-0-	.013	-0-
Annual	3411	3.67	.016	.014	-0-	.013	-0-

TABLE . 26
 AMBIENT AIR-SULFUR DIOXIDE. PPM
 SITE NUMBER 22
 1980

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual		
1 Hr. Maximum			0.013	0.016	0.016		
3 Hr. Maximum			0.010	0.014	0.014		
24 Hr. Maximum			0.006	0.013	0.013		
Arithmetic Mean			0.003	0.004	0.004		
Concentration Range			Hours			%	Cum. %
<0.010			1439	1833	3322	97.39	97.39
0.010-0.14			16	67	83	2.43	99.82
0.015-0.019				6	6	.18	100.00
Total	-0-	-0-	1455	1956	3411	38.83	
Downtime	2184	2184	753	252	5373	61.17	
Total Time at site	2184	2184	2208	2208	8784		

IV AIR QUALITY INDEX

The Environmental Protection Agency (EPA) has developed a uniform standardized daily air quality reporting index, called the Pollutant Standard Index (PSI), locally called the Air Quality Index (AQI) to be used by State and local agencies. The use of this index for reporting air quality was made mandatory on May 10, 1979 in the Federal Register/Vol. 44, No 92/Part 58, Subpart E, Appendix G.

This index is dependent upon measured concentrations of the five pollutants which have been assigned National Ambient Air Quality Standards (NAAQS), Federal Episode Criteria, and Significant Harm Levels; i.e., total suspended particulate, carbon monoxide, sulfur dioxide, nitrogen dioxide, and ozone. The index converts air pollution concentrations to a normalized number on a scale of zero to five hundred, with the National Ambient Air Quality Standard for each pollutant being assigned the value of 100. This approach is believed to be easier for the public to understand than a report of actual pollutant concentrations. Index values are calculated for each of the five pollutants. The highest of these is the report value. Five descriptor words have been chosen to depict daily air quality: "good" (0-50), "moderate" (51-100), "unhealthful" (101-200), "very unhealthful" (201-300), and "hazardous" (301-500). If pollutant concentration warrant, the AQI report is expanded to include identification of the problem pollutant, cautionary statements and generalized health effects.

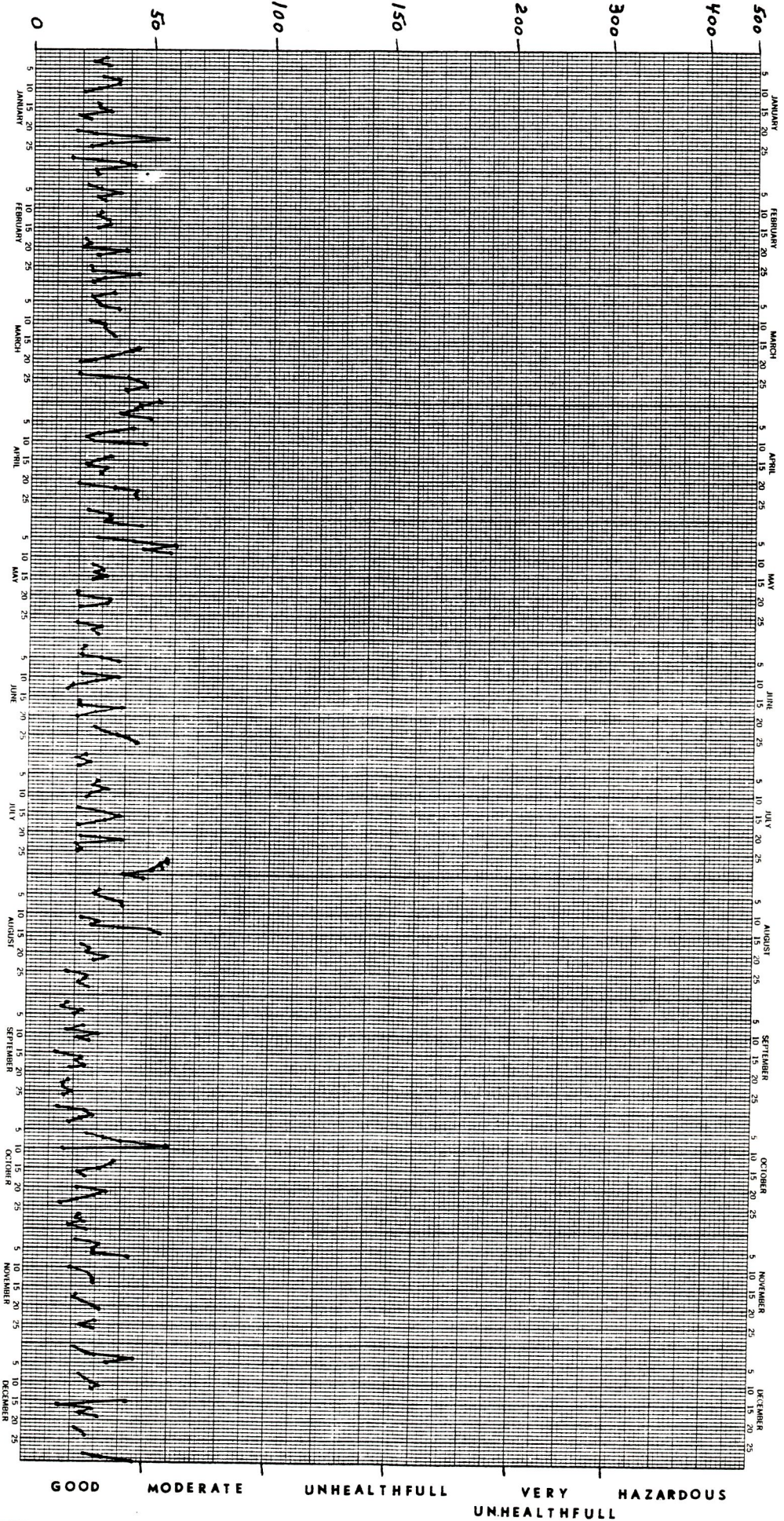
Adoption of the AQI by many pollution control organizations has reduced the confusion previously encountered due to the existances of many different indices. AQI has several advantages: (1) it is simple and can be easily understood by the public, (2) it can accomodate new pollutants, (3) it is based on a reasonable scientific premise, (4) it relates to National Ambient Air Quality Standards, Federal Episode Criteria, and Significant Harm Levels, and (5) it exhibits day to day variations.

The Palm Beach County Health Department samples for the above pollutants and has utilized the Air Quality Index since April 28, 1976. A typical air quality report for Palm Beach County would be "The Air Quality Index is 31. The ambient air quality is within the good range." Index advisories are issued to local newspapers, televisions and radio stations each morning and afternoon Monday through Friday. Figures 3 and 4 show daily plots of the AQI for the year 1980. Table 27 gives a statistical analysis of the monthly morning and afternoon values. As noted, TSP or Ozone concentrations accounted for all values in the moderate range.

TABLE 27
AIR QUALITY INDEX
WEST PALM BEACH
1980
A.M. DATA

	Days					
Month	Good	Moderate	Maximum	Minimum	Mean.	SD.
Jan.	21	1	55	16	29	9
Feb.	21	0	44	21	28	6
March	20	1	53	20	34	9
April	22	0	49	20	34	9
May	19	2	60	20	33	12
June	21	0	45	16	28	8
July	19	3	58	20	31	12
Aug.	19	2	55	17	31	10
Sept.	21	0	30	13	20	4
Oct.	22	1	59	15	27	10
Nov.	17	0	43	20	28	5
Dec.	21	0	46	15	29	8
Year	243	10	60	13	29	10
P.M. DATA						
	Days					
Month	Good	Moderate	Maximum	Minimum	Mean.	SD.
Jan.	20	2	58	21	33	9
Feb.	21	0	46	24	34	6
March	20	1	53	30	38	6
April	19	3	54	28	41	7
May	16	5	66	21	40	12
June	16	5	60	18	37	15
July	15	7	59	21	42	12
Aug.	19	2	55	22	34	10
Sept.	21	0	34	15	24	6
Oct.	22	1	59	20	30	9
Nov.	17	0	43	20	30	7
Dec.	21	0	46	22	33	7
Year	227	26	66	15	34	11

Of the values in the Moderate category, T.S.P. values were responsible on ten days for both morning and afternoon A.Q.I.'S. All others in the Moderate range were related to Ozone concentrations. No A.Q.I. values above the moderate zone were reported.



P.M. AIR QUALITY INDEX

WEST PALM BEACH, FLA.

1980

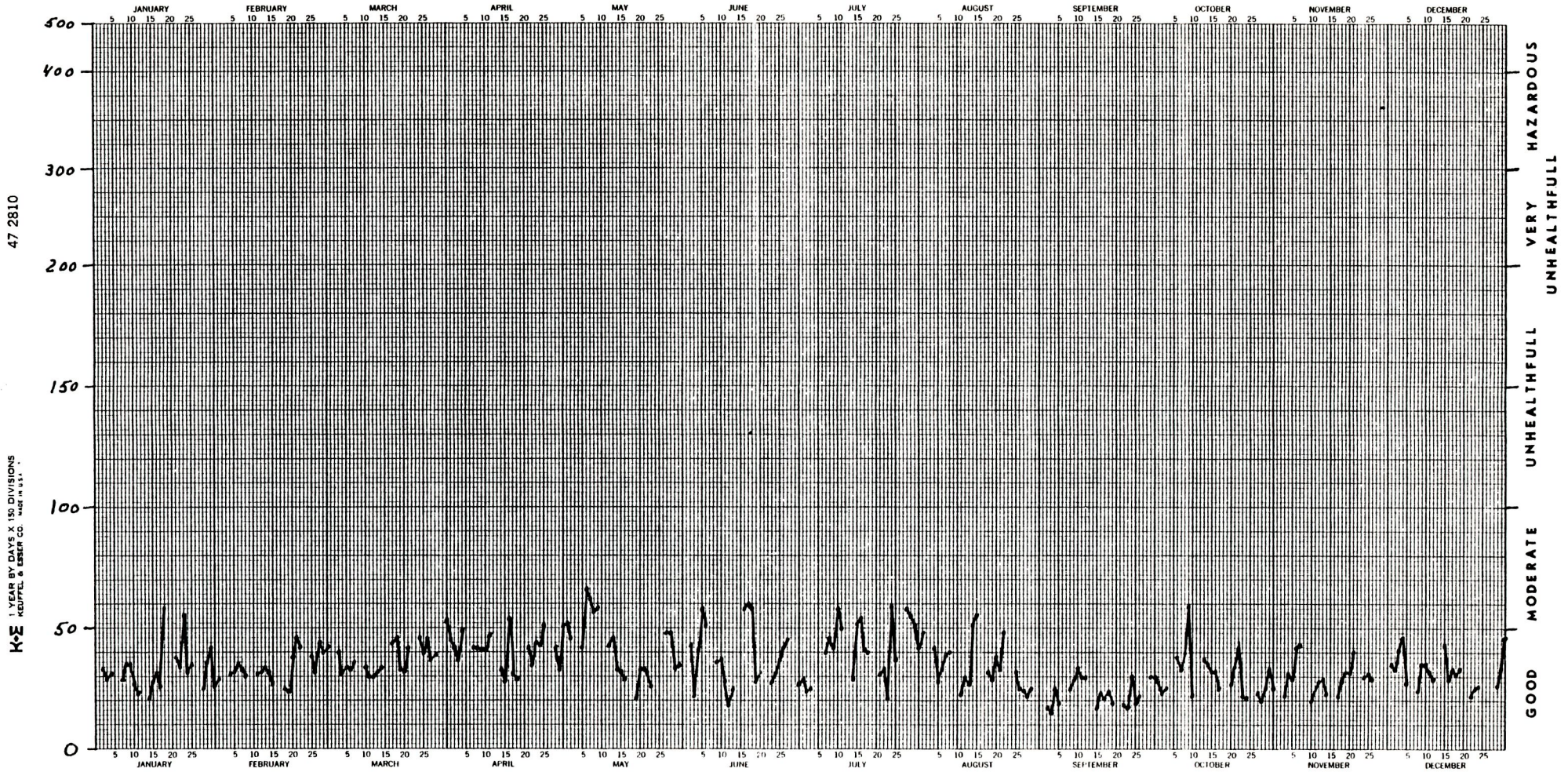


FIGURE 4

EMISSION INVENTORY

INTRODUCTION

Air Pollution has come about as a by-product of the technological advancement of modern society. In this advancement, society has developed ways to prevent and control atmospheric emissions.

An initial step towards improving the air pollution situation is to define the problem areas by determining the sources and components of air pollution. This is accomplished by the emission inventory, which addresses the source, pollutant types, and quantities of atmospheric emissions.

An emission inventory is an essential tool for an air pollution control program by providing: information for the design of an air sampling and air analysis program; the relative contribution of the various pollution sources; data for the development of control strategies; and information for regional planning authorities.

Limitations in the state-of-the-art knowledge introduce uncertainties in a number of factors, such as reported fuel usage figures, fuel composition, process information, and emission factors which will not produce highly precise information for the emission inventory. In spite of these limiting factors, the emission inventory can yield results with adequate accuracy for the purpose of a county air pollution survey.

The emission inventory presented in this report represents calculated emissions from major point sources and generalized estimates of emissions from area sources.

MAJOR POINT SOURCES

During 1980, there were at least 23 major air pollution point sources in Palm Beach County which emitted a significant emission tonage of one type of

air pollutant or more. A list of these major sources found in this chapter details air emissions by type in tons per year during 1980.

AREA SOURCES

Area sources represent a collection of many small sources which may emit only small quantities of air pollutants, but because of the great number of small sources, their collective impact may be very significant. The object of area source calculations is to obtain an accurate estimate of this collective contribution to total emissions. Such an estimate can never be exact because it would be impossible to determine the emissions from every small source.

Emission factors utilized in the inventory are found in:

- (1) Compilation of Air Pollution Emission Factors, AP-42, Supplements 1-10, Third Edition, February 1980, published by the U.S. Environmental Protection Agency, Office of Air and Waste Management, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, 27711.
- (2) Guidelines for Air Quality Maintenance Planning and Analysis, Volume 7: Projecting County Emissions, EPA-450/4-74-008, Second Edition, January 1975, U.S. Environmental Protection Agency, Office of Air and Waste Management, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, 27711.
- (3) National Emissions Data System (NEDS) Source Classification Code and Emission Factor Listing, January 1979, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Monitoring and Data Analysis Division, National Air Data Branch, Research Triangle Park, North Carolina, 27711
- (4) Procedures for the Preparation of Emission Inventories for Volatile Organic Compounds, Volume I, EPA-450/2-77-028, December 1977, U.S. Environmental Protection Agency, Office of Air and Water Management, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, 27711.

(5) Mobile Source Emission Factors(For Low-Altitude Areas Only,) EPA-400/9-78-006, March 1978, U.S. Environmental Protection Agency, Office of Air and Waste Management, Office of Transportation and Land Use Policy, Washington, D.C. 20460.

TABLE 29
SUMMARY
1980 AIR POLLUTION EMISSIONS
PALM BEACH COUNTY, FLORIDA
TON/YEAR

AREA SOURCES	PARTICULATES	SO ₂	SO ₃	CO	HC	NO ₂	ALDEHYDES	ORGANIC ACIDS	TOTALS
MOBILE SOURCES:									
Highway	2103	226		189156	20849	12189	40	39	224602
Aircraft	24	51		2301	342	499			3217
Vessels	16	184		4	3	30			237
Railroads	44	100		228	165	648	10	12	1207
FUEL COMBUSTION:									
Miscellaneous	39	757	11	58	13	390			1268
MINERAL PRODUCTS:									
Concrete Batching	33								33
SOLID WASTE DISPOSAL:									
Incineration	6	1		6	2	14			29
Open Burning	2796			23025	3947				29768
SUGAR CANE FIELD:									
Burning	6231			60087	11869				78187
EVAPORATION LOSS:									
Solvent, Dry Cleaning, & Surface Coating					4980				4980
Petroleum Storage					148				148
Petroleum Marketing					2367				2367
AREA SOURCE TOTALS	11292	1319	11	274865	44685	13770	50	51	346043
POINT SOURCE TOTALS	5084.3	11078.2	97.1	2858.9	2483.3	15001.9			36603.7
GRAND TOTALS	16376.3	12397.2	108.1	277723.9	47168.3	28771.9	50	51	382646.7

